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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/627,231	07/25/2003	John Erickson	1027.P006USC1	2442

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DALLAS OFFICE OF FULBRIGHT & JAWORSKI L.L.P.
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EXAMINER

FAULCON JR, LENWOOD

ART UNIT	PAPER NUMBER
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3762

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/627,231	ERICKSON, JOHN	
	Examiner	Art Unit	
	Lenwood Faulcon, Jr.	3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-34 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 25 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/22/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5-6, 8-9, 11, 13, 15 and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Canfield (U.S. Patent No. 5,486,201).

Canfield teaches of a system that comprises an active discharge circuit that actively discharges a coupling capacitor in an implantable medical device after an electrical pulse has passed through the coupling capacitor from a therapy circuit within the medical device to the tissue (col. 2 lines 44-48). Canfield also teaches of the active discharge circuit comprising a switching device, a charge transfer capacitor, a discharge voltage supply and clock (col. 2 lines 49-54). Canfield further teaches that the active discharge circuit includes a switch that has a first, second and common pole (col. 5 lines 30-32). Canfield also teaches of having a first electrode of the coupling capacitor coupled to a therapy circuit within the implantable device and a second electrode of the coupling capacitor coupled to the tissue (col. 2 lines 49-52).

Canfield also teaches that in the event that the proximal electrode of the coupling capacitor carries a negative charge after a stimulation pulse from the therapy circuit passes through the coupling capacitor, the charge supply is selected to supply positive charge to the transfer capacitor, which then transfer the positive charge to the

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negatively charged proximal electrode of the coupling capacitor in response to repeated coupling of the common pole to the first pole and the second pole (col. 5 lines 58-67).

Canfield further teaches that this results in the coupling capacitor being actively discharged after a stimulation pulse passes through the coupling capacitor (col. 5 line 1 and col. 6 lines 1-2). Canfield also teaches that actively discharging the coupling capacitor in this way results in a pace/sense lead being used to sense cardiac activity free from distortion that would otherwise be caused by the charge on the coupling capacitor (col. 6 lines 2-5).

It is inherent in the system as taught by Canfield that the coupling capacitor provides a net zero current flow through living tissue, since coupling/blocking capacitors operate in this manner. It is also inherent in the system as taught by Canfield that high frequency stimulation pulses could be produced.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4, 7, 10, 12, 14, 16-18 and 21-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Canfield (U.S. Patent No. 5,486,201) as applied to claims 1, 5-6, 8-9, 11, 13, 15 and 19-20 above.

It would have been obvious to one having ordinary skill in the art to modify the system as taught by Canfield to include a second pulse generator for generating the

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reverse pulse, since it common known in the art to provide more than one pulse generators to enhance the operation of a system. It would have also been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Canfield to have the first stimulation pulse and the reverse pulse to be asymmetrical, in order to provide efficient operation and to assure complete discharge of the coupling capacitor.

It would have further been obvious to one having ordinary skill in the art at the time of the invention to use the system as taught by Canfield to apply stimulation pulses at varying frequencies, including greater than 250 Hz, according to the treatment deemed necessary. It would have also been obvious to one having ordinary skill in the art to use the system as taught by Canfield to apply stimulation pulses to the spinal cord, which may include at least one nerve bundle, since the spinal cord is a body tissue and pain treatment devices that stimulate the spinal cord are common in the art. It would have also been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Canfield to include array of electrodes and an array of capacitors, depending on the type and magnitude of treatment and/or tissue to be treated.

Conclusion

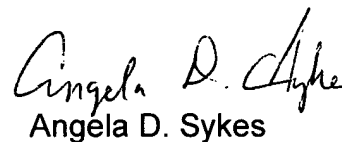
5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bowers (U.S. Patent No. 3,563,247), Bowers (U.S. Patent No. 3,835,865), Lewyn et al. (U.S. Patent No. 4,114,627), Stein (U.S. Patent No. 4,406,286), (U.S. Patent No. 4,991,583), (U.S. Patent No. 5,609,611), (U.S. Patent No. 6,473,649).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela D. Sykes, can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Lenwood Faulcon, Jr.


Angela D. Sykes

Supervisory Examiner

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SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700